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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,481	11/25/2003	Toshio Manaka	056203.52940US	4362
23911	7590	09/12/2007		
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER HSIAO, JAMES K	
			ART UNIT 3683	PAPER NUMBER
			MAIL DATE 09/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/720,481		MANAKA, TOSHIO	
	Examiner		Art Unit	
	James K. Hsiao		3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The final action mailed on 5/23/2007 has been vacated.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/24/2007 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **15-25** and **27-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirai et al in view of Watabe et al. (JP 58-71253) and Crossman (US-4542809).

Regarding claims **15-22** and **27-30** Shirai discloses an electro-mechanical braking device comprising: a motor for generating a rotation torque when power is supplied thereto (**figure 2, element 14**); a braking pad responsive to the rotation torque of the motor for depressing a braking disc to generate a braking force (**figure 2,**

element 16); and an electric parking brake mechanism responsive to reception of a control signal for controlling a parking brake (**figure 9**), wherein the rotation torque generated by the motor is controlled to control the braking force on the basis of step-on amount of a braking pedal or a braking force instruction, the control signal for controlling the parking brake state is transmitted to the electric parking brake mechanism on the basis of a parking brake instruction(**column 32, lines 44-51**)

Regarding claims **23, 24, and 25**, Shirai discloses an electro-mechanical braking device wherein the condition that the vehicle is rendered to be stop state includes that the vehicle has a speed of substantially zero and an engine rotational speed of substantially zero (**figure 17, elements s223 and s224**). Shirai discloses an electro-mechanical braking device wherein the control signal for controlling the parking brake state is transmitted to the electric parking brake mechanism on the basis of satisfying the condition that a transmission gear is rendered to be non-connected state. Shirai discloses a control signal for controlling the parking brake state is transmitted to the electric parking brake mechanism on the basis of a state indicating that an acceleration pedal is not stepped on (**figure 9, element 226**)

Regarding Claims **15,21, and 22** Shirai et al. does not teach a parking brake mechanism for maintaining braking force when power not supplied to said electro-mechanical brake a control signal thereto turned off, wherein when the braking pedal stroked or the braking operation signal is detected, said parking- brake mechanism controlled so that braking force may be maintained by said electro-mechanical brake and wherein when the braking pedal is stepped on or the braking operation signal is

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detected, depending on a state of a power supply switch or an ignition key switch of the vehicle, it is determined whether the braking force of the electro-mechanical brake is maintained by the parking brake mechanism or not.

Watabe et al. discloses the control signal for controlling the parking brake state that is transmitted to the electric parking brake mechanism on the basis of detecting that a switch for a power source is changed to non-operative state when the braking pedal is stepped on or the braking force instruction is received, and the lock mechanism is actuated on the basis of the control signal. **(See abstract)**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the electro-mechanical brake of Shirai with the art of Watabe et al. to maintain the brake force status with the ignition in the off position in order to provide a safety measure due to power loss.

Regarding claims **15, 16, 17, 18, 19, and 20**, Shirai lacks a locking device. Crossman discloses an electromechanical braking device comprising a rotation/linearity movement conversion mechanism for converting the rotation torque generated by the motor into a linear movement **(figure 1)**, wherein the lock mechanism mechanically locks the linear movement of the rotation/linearity movement conversion mechanism to maintain the braking force even upon termination of the braking force instruction. **(Abstract lines 20-22 and column 2, lines 45-53)**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the discloser of the above with the locking device of

Crossman in order to maintain the braking force in the locked position and provide a safety measure in case of a power loss.

Regarding claims **28 and 29**, Shirai discloses in view of Watabe and Crossman all of the above elements. Claims 28 and 29 are methods of using the described apparatuses.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions of Shirai, Watabe and Crossman to use said method in order to operate the parking brake.

Regarding claims **27 and 30**, it is inherent that when a vehicle is driving or that the driving source and driving axis are connected to each other, then the parking brake lock will be disabled and the brake will be released.

Allowable Subject Matter

3. Claim **26** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed on August 1, 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that Crossman is nonanalogous art (unrelated field of aircraft brakes), it has been held that a prior art reference must either

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be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, all of the references are related in the field of vehicle parking brakes.

In response to applicant's argument that the references fail to show certain features of applicant's invention, (i.e., brake mechanism that is maintained even after the braking force command has been terminated) Crossman teaches that the apparatus is provided with a locking mechanism that allows locking of the brake assembly while the vehicle is parked. (note Crossman, col. 6, lines 34-47). Additionally it is well known that in the operation of a screw mechanism, the locked position is maintained until it is actuated in the opposite direction to an unlocked position.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Hsiao whose telephone number is 571-272-

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6259. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JKH

Robert A. Siconolfi 9/4/07
ROBERT A. SICONOLFI
SUPERVISORY PATENT EXAMINER